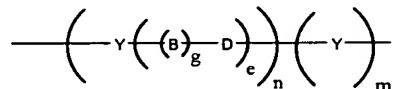


72. (New) An electrode comprising:

a) a monolayer comprising a passivation agent layer comprising conductive oligomers, wherein said conductive oligomer having the formula:



wherein

Y is an aromatic group;

n is an integer from 1 to 50;

g is either 1 or zero;

e is an integer from zero to 10; and

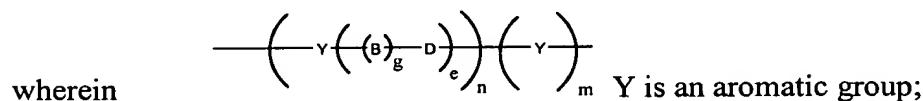
m is zero or 1;

wherein when g is 1, B-D is selected from acetylene, alkene, substituted alkene, amide, azo, esters, thioesters, -CH=N-, -CR=N-, -N=CH- and -N=CR-, -SiH=SiH-, -SiR=SiH-, -SiR=SiH-, and -SiR=SiR-, -SiH=CH-, -SiR=CH-, -SiH=CR-, -SiR=CR-, -CH=SiH-, -CR=SiH-, -CH=SiR-, and -CR=SiR-, wherein R is a substitution group; and wherein when g is zero, e is 1 and D is carbonyl or a moiety comprising oxygen, sulfur, nitrogen or phosphorus; and,

b) at least one nucleic acid covalently attached to said electrode with a spacer, wherein said spacer is an insulator.

73. (New) An electrode comprising:

a) a monolayer comprising a passivation agent layer comprising conductive oligomers and insulators, wherein said conductive oligomer having the formula:



n is an integer from 1 to 50;

g is either 1 or zero;

e is an integer from zero to 10; and

m is zero or 1;